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THE AMERICAN BEE JOURNAL

OLDEST BEE PAPER IN AMERICA

GEORGE W. YORK,
Editor.

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TO BEE-CULTURE.

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NO. 7.



"Stars will blossom in the darkness,
Violets bloom beneath the snow."

The North American convention report is completed in this issue of the BEE JOURNAL. We wish to call particular attention to Prof. C. V. Riley's address, which is very interesting, as it comes from one so near to the head of the Department of Agriculture.

We will put the whole report in pamphlet form in about two weeks, and any one desiring a copy of it can get it by sending us 25 cents. Of course the members of the Association will get it free.

Very much matter for publication has accumulated during the past few weeks, but we felt that the North American Report should come first; now as that is finished, we will be able to publish other very interesting matter that we have been compelled to hold back. We trust that those who have sent in anything for publication in the BEE JOURNAL will not get uneasy, as we are doing the very best we can, and will soon reach their particular contribution.

Sugar-Honey Folks Again.

—In reply to our editorial remarks on page 136, Dr. Miller has this to say further regarding those who think it would be a good thing for bee-keepers to feed sugar to produce comb honey:

Now, look here, Mr. Editor, don't you imagine that you're going to choke me off by calling me "kind-hearted." May be you'll not think me so kind-hearted before I get through. Reading very carefully all you say on page 136, it seems to me you don't squarely meet the issue. You say, "When we have committed a wrong we expect to suffer for it, unless by showing sincere repentance we may be forgiven." That's all right, but are you going to repent just because somebody calls you names, instead of trying to show you anything you have done wrong?

That's a nice figure about "switching," but figures sometimes don't prove anything, and many a train has been wrecked just because it "kept on the main line" when it ought to have been side-tracked. In fact, in the present case, the trouble is that the sugar-honey idea wasn't switched off onto a side-track long before it was, and quietly left there.

Are you "so mad with rage" that you can't look at the thing straight? The whole gist of the matter lies in a question that I asked you, and that you utterly ignore. I said, practically, that these brethren honestly believed that bees make honey out of sugar, and then asked, "Believing that, was there anything criminal in their saying so?" Please give a categorical answer to that.

I think the whole case in a nutshell is just about this: They said, "Bees make honey out of sugar." We said, "They

don't. Shut up." They shut up, and stay shut up, and you're not satisfied.

Now will you formulate in words what you think our mistaken friends ought to say? They have a certain belief that I think erroneous, and yet may they not be just as honest in their belief as I? *Have you proved that their belief is wrong?*

You say, "We bear no malice toward them, but we feel that they have made a mistake that they should hasten to correct." Candidly, I don't believe you bear any malice, but I think others do believe it, and think they have grounds for their belief. You want them to "hasten to correct" their "mistake." Now how do you want them to correct it? Do you want them to say, "We were mistaken in our views?" But they don't think so. Do you want them to lie? What do you want anyhow? Do you remember that at one time A. I. Root thought it would be a good thing to feed glucose? Then everybody called out, "Stop; it will hurt the business." Then he stopped. Did he get down on his marrow bones and "hasten to correct his mistake?" No, he just stopped, and no one wanted him to do anything else. Now these brethren have stopped; hadn't you better stop?

C. C. MILLER.

Did you ever read so many questions in all your life? Why, one would think that our good Doctor would turn completely into a regular interrogation point! We think he fully appreciates the *questionableness* of the subject he's asking about, and that may account for his numerous "categorical" inquiries.

We never thought of "choking off" the Doctor by calling him "kind-hearted." We have heard of "killing people with kindness," but somehow we don't think that kind of "murder" is very effective. We wouldn't like to try that on a mule, at any rate—but may be that is what *he* is trying to do with us. Perhaps we are rather mulish—but we believe mules, sometimes, have their advantages.

As to repenting "just because somebody calls you names," we would say that we didn't know anybody was called names; but even if they had been, there likely would be a good cause for it. After all that has been printed in the

BEE JOURNAL on this subject, we are surprised that any one should question the wrong done by the utterances of the sugar-honey people. If they haven't seen the wrong yet, they must be "as blind as those who won't see." If bee-keepers can conscientiously feed sugar to bees to be stored in combs, and then sell it for honey, may they not almost as consistently mix glucose with extracted honey, and sell it for pure honey? It differs mainly in appearance—the results are about the same.

We quite agree with the Doctor that "the trouble is that the sugar-honey idea wasn't switched off onto a side-track long before it was, and quietly left there." The BEE JOURNAL thought it had succeeded in getting the "idea" safely side-tracked over a year ago, but its friends wouldn't let it stay side-tracked. We are not to blame for their running it on the main line again, and causing a regular smash-up. All "wrecks" must be cleared away, however, no matter who is responsible for the accident.

No, sir; we're not "mad with rage;" and are "prohibition" enough both in principle and practice to *always* "look at the thing [any thing] straight!" We never see things "double," if that's what you mean. Just because "these brethren *honestly believed* that bees *make* honey out of sugar"—*does that make it so?* If their statements result in the great harm to the production of honest honey, that thousands of the best bee-keepers really believe it will, then we would say, yes, it *was* criminal for them to say what they did. A bee-keeper may "honestly believe" that mixing glucose with honey and then selling the mixture as "honey" is right—but then all other conscientious bee-keepers, who have a speck of morality left, know that it isn't right.

Shutting up, and staying "shut up," will never counteract the evil effects of what was published *before* the "shut up" admonition was heeded. "What is writ, is writ," and you can't "unwrit" it.

But if what was written should result just opposite to what was intended, one can at least express a regret. We will not attempt to "formulate in words what" we "think our mistaken friends ought to say," but it is another mistake for any one to say that *we* expect them to state anything contrary to their honest convictions. The question is not whether bees *make* honey or not, but whether the *publishing* of the suggestion of feeding sugar to bees for the production of honey will not result in untold danger to floral honey production. We have said before, that these columns would be open to a manly expression of regret that the stupendous mistake had been made, of *publishing the idea*.

We know a man who is "honest" in his "belief" that he is doing right when he sells liquid damnation to his fellow men; but *we* think the whole cursed traffic should be annihilated. We don't have to prove to that man he is wrong. Self-evident truths need no proof.

Again we must say that we bear no malice toward the sugar-honey folks, or anybody else. But we do feel sorry that we must disagree with them in their views; and that we feel it our duty to oppose them in their suggestion of producing honey by feeding sugar syrup to bees. We don't want any one to "lie," but we cannot believe that only two or three are right about this matter, and all the thousands of others are wrong. We prefer to stay with the majority this time, though it was safer with the minority in the days of Noah and his ark.

Bro. Root's glucose idea is not a parallel case. Good testimonies say that bees don't like glucose in their honey any more than do people. But we are very certain that Bro. Root had grace enough to say that if what he suggested was going to result disastrously to bee-keeping, he most assuredly regretted ever having even hinted at such a thing.

These latter-day brethren may have "stopped" as did Prof. Wiley in his "manufactured comb honey" talk, but

just like that unfortunate utterance we fear the sugar-honey idea will be carried in the sensational newspapers throughout the length and breadth of the land, and, it seems to us, cannot help being to the great detriment of the sale of pure floral honey. We sincerely hope that we may be wrong in our views, but we are inclined to believe that we are not.

Is there Poisonous Honey?

—The following question is sent for reply in the BEE JOURNAL:

Does honey from the allanthus poison bees? Is there any other honey from common plants or trees that poison bees?

Prof. Cook replies thus:

From all that I can gather, I doubt if any natural honey will kill bees or people. The stories about allanthus, rhododendron, etc., are much to be questioned. It is very probable that some plant-louse or honey-dew honey is bad for bees, and will prove fatal for winter, just as glucosed honey does. I think the sickness from eating floral honey is not because the honey is poisonous. Of course, I may be wrong, but I have excellent reasons for my opinion.

A. J. Cook.

CONVENTION DIRECTORY.

Time and place of meeting.

1893.
Feb. 25.—Wabash Valley, at Vincennes, Ind.
Frank Vawter, Sec., Vincennes, Ind.

April 5, 6.—Texas State, at Greenville, Tex.
A. H. Jones, Sec., Golden, Tex.

May 4.—Allegany Co., at Belmont, N. Y.
H. C. Farnum, Pres., Transit Bridge, N. Y.

[37] In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—Dr. C. C. Miller...Marengo, Ills.
VICE-PRES.—J. E. Crane...Middlebury, Conn.
SECRETARY—Frank Benton, Washington, D. C.
TREASURER—George W. York...Chicago, Ills.

National Bee-Keepers' Union.

PRESIDENT—Hon. R. L. Taylor...Lapeer, Mich.
GEN'L MANAGER—T. G. Newman, Chicago, Ill.

Moving Bees in Winter.—

The following questions are asked by Mr. F. H. Richardson, of Elliott, Mo.:

1. I have just moved my bees in wagons very carefully. It was pretty cold. Please tell me whether it will hurt them. I found 6 colonies with light stores. 2. How can I feed syrup in cold weather?

1. Yes, moving bees in cold weather is likely to hurt them, but it depends upon circumstances how much. If it was not too cold, and they had a chance for a flight within a few days afterward, the weather being warm enough, the probability is that you will not detect any great damage. Since the moving is already done, it is well to look on the hopeful side, and in any case it would be well for you to report in May how they come out, for the benefit of others.

2. In freezing weather you can feed syrup most easily by pouring it all over the bees, and this will kill them quicker than to let them starve to death. In other words, don't think of feeding syrup unless the weather continues warm enough for the bees to fly freely long enough to store the syrup and get it in good shape, which can hardly be before spring fairly opens. If you have comb honey, that is the best winter feed, but be sure the bees get to it. If you haven't comb honey, make candy.

Old Subscribers.—In response to our call in the issue of the BEE JOURNAL for Dec. 29th, for those to report who have taken this paper ever since it was started, in 1861, we have heard from the following, which shows there are very few who have been subscribers for 32 years:

J. L. Hubbard, Walpole, N. H.
A. D. Sellers, Jefferson City, Mo.
R. Dart, Ripon, Wis.
D. D. Daniber, Madison, Wis.
Wm. Ashcom, Ligonier, Pa.
Wm. Wilson, Bardstown, Ky.
J. D. Goodrich, E. Hardwick, Vt.

"Bees and Honey"—page 197.

**MR. G. M. DOOLITTLE.**

We are much pleased this week to be permitted to present to our readers the picture and biographical sketch of one so well and favorably known all over the bee-keeping world—Gilbert M. Doolittle.

Mr. Doolittle, of Borodino, N. Y., was born April 14, 1846, near his present location, in the town of Spafford, Onondaga County. His parents were natives of Connecticut, and moved to New York a few years before he was born; hence the thoroughness, energy and activity of the "Yankee" are largely manifested in the subject of this sketch. From his earliest youth, Mr. D. has been an admirer of the busy bee, taking great interest in them when kept by his father. Later on, nearly all the bees in his section of country perished with foul brood, so that from 1856 to 1862 a colony of bees was a rarity. After this the disease seemed to abate, so that, in 1868, bees were quite common again.

As 1868 was a splendid honey season, bee-talk was rife in his locality, which again brought to life old ambitions which had been crushed out by the former loss by disease among the bees, so that the spring of 1869 found Mr. D. with 2 colonies of bees of his own, as the starting-point to his present apiary. Wishing to know for himself all of the minutiae of this (to him) interesting pursuit, he procured nearly all the bee-books of that day, and subscribed for the bee-papers. As his ambition led him toward the practical side of bee-keeping, Quinby's "Mysteries of Bee-Keeping Explained" was his favorite, the pages of which

were as familiar to him as a nursery rhyme. His intense desire to learn and investigate the bees in every particular has been such that he has dreamed of them at night, and thought of them in his working hours to almost an absorbing extent, and to-day he is still a student, believing that there are many unexplored regions, and much room for the deepest thought, even on the practical part of this pursuit.

In the first years of his apicultural study, Elisha Gallup, then living in

was in bee-keeping, which has caused the subject of this sketch to study along the line of queen-rearing to a much larger extent than any other part of this interesting pursuit, and it is believed by him that much of his success as a honey-producer has come from this, and his ever-anxious care to get the hive filled with brood at such a time that there would be multitudes of field-bees at the opening of the honey harvest.

To the above we may add the following, which was written of Mr. Doolittle



GILBERT M. DOLLITTLE.

Iowa, gave him by letter much practical instruction, which, together with Gallup's articles in the different papers of that time, so grew into his life that he went by the name of "Gallup" among bee-keepers about him for several years; and to-day he is often heard to say that there never has, to his mind, been a greater man in the realm of bee-keeping than E. Gallup.

Gallup, in his private letters, laid great stress on good queens, claiming that around the queen centered all there

by a good friend, in the "A B C Bee-Culture."

As a business, Mr. D. has made bee-keeping a success, although he has never kept a large number of colonies, principally, if not wholly, because he prefers to keep no more than he can manage without outside help. In 1886 he wrote in the *AMERICAN BEE JOURNAL*:

"From less than 50 colonies of bees, spring count, I have cleared over \$1,000 each year for the past 13 years, taken as an average. I have not hired 13 days' labor in that time in the apiary, nor had apprentices or students to do the work for me, although I have had

many applications from those who wished to spend a season with me. Besides my labor with the bees, I take care of my garden and small farm (29 acres); have charge of my father's estate, run my own shop and steam engine, sawing sections, hives, honey-crates, etc., for myself and my neighbors; write for seven different papers, and answer a host of correspondence."

Mr. D. works for comb honey, and also makes quite a business of rearing queens for sale. Although a prolific writer, his fund of information never seems exhausted, and he is uniformly practical and interesting. His writings give evidence of the close and careful thinker. In personal appearance Mr. D. is of commanding presence, being large (275 pounds) and well formed, of sandy complexion, and in manner he is a genial Christian gentleman.



CONDUCTED BY

Mrs. Jennie Atchley,
GREENVILLE, TEXAS.

Our School in Bee-Keeping.

Dear readers, I will now begin bee-keeping with you "from the stump," and will go through almost all the details connected with successful Southern bee-culture. As promised, I do this for the benefit of beginners, and as some of our readers have asked me to tell them how to rear queens, I will go with you through this branch of bee-keeping, before I am done. These articles I will call "Our School in Bee-Keeping," and the larger the class the better the school, or the more there are of us the happier we will be.

All the tuition fee that I will charge is \$1.00 to pay for the AMERICAN BEE JOURNAL for a year, and you can have the book, "Bees and Honey," besides. Should you fail to start in with us, we will send you all the back numbers, letting your subscription begin with the

school. Those of my bee-keeping friends in the South, who take the BEE JOURNAL, will confer a great favor if they will send to me the names of their neighbor bee-keepers that do not take it, and tell them that this little school will be worth to them twice the price of the paper, and encourage them to send in their subscriptions.

Now, I am desirous of doing more for bee-keeping in the South, in the next few years, than has been done in the last ten; and to do this, I *must* get the bee-keepers to read the BEE JOURNAL, and trust that all my friends in the South will help me out in this, by sending in all the names and subscribers you can.

Now I will close this preface, by again asking all to lend a helping hand, and let's bring forward bee-keeping in this Sunny Southland of ours—the paradise of the honey-bee.

THE FIRST LESSON.

First, let me ask if you have a book (a colony of bees), if not, you had better get one by the next lesson, as we cannot learn as well without books. I will take the ones with box-hives as the A B C class, so you that bought your bees in a frame hive just wait a little until I show the others how to transfer their bees and combs to a frame hive, then we will all start together.

The best time to buy a colony of bees is in the spring, about fruit-bloom time, and the best time to transfer it will be as soon as you get it home. Yes, and I had better tell you how to get your hive home.

Go over to the nearest neighbor that has bees, and tell him you want a colony of bees, and that you are not particular whether they are black or yellow, but you would like to buy a thrifty colony. They should cost you about \$2.50, or if the hive is real heavy, and a good colony of bees, do not grumble if he asks you \$3.00 for them.

Now, light a smoker well, and get a sack that is large enough to slip over the hive, slip the hive into the sack, and lay it in your wagon.

Ah, hold on, you are doing wrong right on the start; that is just why so many people fail in working with bees—they go right on without asking permission from the bees; that is, never touch the hive until you have smoked the bees well. Now you have smoked long enough; in four or five minutes they will all be filled with honey, then you can do what you please with them—they have given you permission.

Now you are ready. Put the hive into the sack and lay it in the wagon, drive home, and every time you handle them in any shape, smoke them until they become used to being handled, and then always thereafter just smoke them when they begin to show fight. Now you have a good start—a fine colony of bees in a box-hive.

I will now show you how to transfer them. Lay the hive on a table, raise the entrance of the hive about two inches the highest, and let the top of the hive extend out over the edge of the table. Now knock off the top of the hive, only raise it up a little at first, and blow in some smoke, then take it clear off. Now smoke the bees up toward the entrance of the hive, and they will leave the honey and cluster on the hive. Place a pan or some vessel under the dripping hive, and get as much of the honey out as you can, then pry open the box, or cut the nails with a cold chisel or an old hatchet. To lay the hive down in such a manner as to have the combs edgewise is best.

Now, if the bees have clustered on any part of the hive, you can take a dipper and dip them off, and pour them into the new hive, then they will be out of your way.

Now begin taking out the combs, and use the smoker to drive the bees out of your way, and as you lift out the combs, brush the remaining bees off of it into the new hive. A brush made of corn-shucks is good, tearing the shucks into shreds, and tie on a handle like a little broom; this makes the best and cheapest brush of anything that I have tried. When it becomes hard, dip it in water, when it will be soft, and will not hurt or make the bees mad.

Now as you take out the combs, lay those containing the most honey by themselves, and put the brood-combs in a separate place. When you have the combs all right, then lay the frames down on the transferring board—a board a little larger than the frame, and you should have two of them. Now lay the combs on the frames, and cut them to fit the frames, and tack small, thin strips of wood across the frame in such a manner as to firmly hold them. Then turn the frame (board and all together) over, by placing the other transferring-board right on top of the frame that you have tacked in; take hold of the two boards, and turn over, holding tight enough to keep the comb and frame in place.

Remove the board, and tack on strips as before; then hang it in the new hive with the bees, and continue this until all

combs are in that you wish to put in, and close up the new hive—I mean, put on the quilt and cover, and place the hive where wanted, and all is well. If you did not have combs to fill all the frames, you can, if you wish, put in foundation in the rest.

Now, you have the bees into a frame hive, where you can handle them as you choose; and if you have done a good job, the combs will be just about as straight as if built there by the bees.

There are other ways of transferring, but I have given you this as my best way to have the combs nice and straight. I can transfer some faster with strings, or with tin clasps, but when the combs are heavy with brood or honey, they will bulge. Where the combs are cut to fit nicely, they will stay without anything to hold them, but you had better use the wooden clasps clear across until you get used to it. Then when the bees get the combs well fastened, you can pull off the clasps, and you are done.

Now these directions are where you are to do all the work yourself. Of course, when you have plenty of help you can cut out combs, and some one else tack in, and another dip off the bees and place the transferred combs in the new hive, so by the time you get the combs all cut out, the bees are ready to put away, etc. Now the A B C class is ready to start in with the next class.

Bees Gathering Pollen in Mississippi.

Bees, in this part of southern Mississippi, so far as my knowledge extends, have wintered finely, though we have had the coldest weather, and the most of it, that we have had for years. We have had some pleasant weather for a week or ten days past, and the bees have had a good flight, and were bringing in pollen yesterday and to-day as though spring had opened up in earnest. Upon examination I find my bees have plenty of stores to carry them through. The indications are that we will have a good honey-flow this year. I hope to see our Southern bee-keeping friends give us the news from different parts of our Southland.

R. W. THOMPSON.

Estabutchie, Miss., Jan. 28, 1893.

Please Send Us the Names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you, and secure some of the premiums we offer.



How to Safely Disinfect Foul-Broody Hives, Etc.

Query 858.—1. Having had a colony of bees with foul brood, how can I disinfect the hive so that it will be safe to use again without contracting the disease? 2. Will foul brood originate in a healthy colony of bees if the bees have access to decaying or rotten brood, the brood being taken from a healthy colony and left exposed?—Mich.

1. Boil it. 2. No.—JAMES A. GREEN.

1. Burn it. 2. I think not.—C. C. MILLER.

1. Burn the hive. 2. No.—MRS. J. N. HEATER.

1. Boil it. 2. I should fear it.—WILL M. BARNUM.

1. I do not know. 2. I think not.—JAS. A. STONE.

1. Boil it in water. 2. I don't know.—J. M. HAMBURGH.

1. If I had one hive, and only one, I would burn it. 2. No.—E. FRANCE.

1. By keeping it in boiling water for say 15 minutes. 2. No.—R. L. TAYLOR.

1. Look up authorities on foul brood. 2. I have no experience.—EUGENE SECOR.

1. Sulphur it, and let it remain empty for a season out-of-doors. 2. No.—P. H. ELWOOD.

1. Burn it, and use the ashes around your grape-vines. 2. I do not know.—MRS. L. HARRISON.

1. Keep it five minutes in boiling water. 2. Never; no more than will figs come from thistles.—A. J. COOK.

1. This question cannot be answered in a few words. 2. No, if the brood was not killed by foul brood.—DADANT & SON.

1. I have had no experience whatever with foul brood, and know very little about it. 2. I should say yes.—C. H. DIBBERN.

1. Boiling-hot water will destroy any living germ if the contact is long enough. 2. Such a thing has never occurred in my apiary, and I have no fears that it ever will. But I don't know. I have never seen a case of the disease known as

"foul brood," and if there was ever any such disease among bees in this end of the earth, the oldest men I have met never heard of it.—G. W. DEMAREE.

1. I don't know. I never had any among my bees. I always thought I would burn them up if I had. 2. I think not.—S. I. FREEBORN.

1. I don't believe it can be done. I have tried it, and find it don't pay. 2. Foul brood will not originate in the manner suggested.—J. E. POND.

1. Scald it out thoroughly, then give it a good coat of paint inside, and it will be safe to use again. But unless lumber is high, the better way would be to burn the whole business. 2. No.—MRS. JENNIE ATCHLEY.

1. Boil it for 30 minutes. 2. No. You can contract blood-poisoning from several different sources, but you will not take small-pox from the measles, nor the itch from erysipelas. When you get the germs that produce foul brood, then you will have foul brood, and not before.—H. D. CUTTING.

1. Melt the combs, burn the frames, scald the hive, including top, bottom, and all the traps, even to the smokers and feeders. Old sections should be burned, etc. The trouble is, you are not half thorough and careful enough. 2. No.—J. H. LARRABEE.

1. I think that boiling it for a time would do. There are several disinfectants which I think would do, such as carbolic acid, sulphur, and perhaps chloride of lime. 2. I think not.—M. MAHIN.

1. Wash the hive inside and out with carbolic acid, then give it inside and out a coat of paint. 2. While I cannot say positively, I would dislike to have the experiment tried in my apiary.—J. P. H. BROWN.

1. Burn the hive and all its contents, this winter, for you cannot afford to run any risk for one bee-hive. 2. I think not. But why leave rotten brood around? If you are to be an apiarist worth the name, you will not leave such around you or the bee-yard.—G. M. DOOLITTLE.

1. My belief is that if the inside of the hive was saturated with a mixture of equal parts of alcohol and carbolic acid, and allowed to dry out, it would be safe, especially if a little naphthalene was used upon the bottom-board after the bees were again put into the hive. 2. There seems little doubt but that foul brood may originate in the manner suggested, but not always.—G. L. TINKER.



Report of the North American Bee-Keepers' Convention.

Written for the American Bee Journal

BY W. Z. HUTCHINSON.

(Continued from page 211.)

At this juncture, Assistant Secretary of Agriculture, Hon. Edwin Willits, was introduced, and made a few remarks. In substance he said that the Secretary of Agriculture was in sympathy with bee-keepers. He is not so very much interested in the introduction of fancy races of bees, but is very much interested in the improvement of practical apiculture. In the way of bee-keepers securing aid from the Government there are two difficulties. One is to secure the money to work with. There are very many interests that are asking for assistance, and the average congressman is very ignorant upon bee-keeping subjects. The next difficulty is as to *what to do*. An apiary cannot be established at Washington. The Department of Agriculture has asked for 300 acres of idle land near Washington to be used for experimental purposes, and have failed to get it.

What the Department of Agriculture Ought to Do for Apiculture.

Last year, at the Albany meeting, a committee was appointed to decide what bee-keepers ought to ask of the Department of Agriculture. The committee reported as follows:

The committee to whom was referred the matter of Government aid to apiculture, beg leave to report and advise that the bee-keepers of the United States petition—

1. That the Section of Apiculture in the Division of Entomology, Department of Agriculture, be raised to an *independent Division*.

2. That in connection therewith there be an experimental apiary established at Washington, having all the appointments necessary to a first-class Apicultural Experiment Station.

3. That the appropriation for this Division be sufficiently large so that the work may not be embarrassed for the lack of funds.

This is the least that we can ask in justice to ourselves. That most important part of our business devoted to the production of liquid honey is in great danger of being ruined by cheap sugar. The chief competition of liquid or strained honey in the manufactures is cane-sugar, and the recent removal of the duty on it, and the consequent lowering of prices, has materially lessened the demand for honey. We find that we will have to lower the cost of producing honey in order to meet this most unequal competition so suddenly thrust upon us. Millions of money are taken from the treasury to reimburse the producers of cane and maple sugar for the loss occasioned by the removal of the duty, but our legislators entirely forgot the producers of honey, whose product is but sugar with the flavor of the flowers added. We do not ask a bounty, but we do ask the Government for all the assistance that scientific research and well-directed experimental work can give us in cheapening the cost of production. This is but a moiety of what is granted the sugar men.

Our industry is still in its infancy, and while many million pounds of honey are already produced, the business is capable of an expansion so great as to wholly eclipse the present production of sugar from the sugar-cane. Four contiguous counties have produced, in one season, over four million pounds of honey, and this represents but a fractional part of what might have been gathered. Vast as our business may become, the indirect benefits conferred by the honey-bee on the agriculturists of this country in the fertilization of the flowers of fruits, grains and seeds, will always surpass in value the value of the honey gathered by the bee.

The committee have named Washington as the place for the experimental yard, because it would be most convenient; also because of the longer season in which to experiment. There may be better locations for honey, but for many experimental purposes a poor location may be best. If for any purpose a better flow of honey is desired, such a location may be found a few miles out, and a part of the bees removed to it.

Should the convention decide to adopt this report, it would undoubtedly be best to have a committee estimate the necessary expense, and *immediately* formulate a petition for circulation

throughout the country, naming the amount of the appropriation desired, and the changes called for, together with a few of the reasons why we demand help at this critical juncture.

Respectfully submitted,

P. H. ELWOOD,
J. E. HETHERINGTON, } *Com.*

Following this came an essay by Dr. C. V. Riley, Government Entomologist, on

What the Department of Agriculture Has Done, and Can Do, for Apiculture.

The wisdom of establishing as a part of our Government machinery a Department of Agriculture charged with doing all it can to foster and encourage agriculture in all its branches, will not be questioned by any one who has made himself acquainted with the work of the Department since its organization, first as a bureau in the Department of the Interior, later as a separate Department, and finally as a co-ordinate Department with representation in the cabinet. There are those who would abolish it, and who believe that the moneys appropriated for it are thrown away, but such are ignorant of the needs of agriculture in a great and new country like ours. That, as in all Government bureaus, there is some waste of means, and that some unnecessary or parasitic growths have attached to it which might well be removed or reformed, is also incidental to the development of any Government organization; but so far as my experience goes, there are fewer of these abnormalities in the Department which ministers to the wants of the farmers, than in almost any other of the Departments of the Government. In almost every case, also, they have resulted from political interference, and indeed the greatest danger to the Department as at present organized is the increase of political and bureaucratic influences, which is almost inevitable.

Some of the most beneficent and far-reaching work of the Department was done during its earlier history, when its means were limited, but when the field was fresh, and the opportunities relatively greater; and it is a notable fact that when the appropriation for the introduction of seeds and cuttings did not reach \$10,000, where now it reaches over ten times \$10,000. The introduction of new and improved varieties of grains and fruits gave results that were more beneficial and far-reaching than now, because the fund originally intend-

ed for such purposes has, through Congressional action, been so largely perverted to the miscellaneous distribution of ordinary seeds, as to be looked upon by many as a serious abuse.

It has been the desire of almost every one who has been at the head of the Department to pursue a broad and liberal policy, to the end that all the branches of rural economy might receive their due share of attention. The head of the Department is, however, helpless without Congressional aid and sympathy, and it has too often happened that investigations which promised valuable results have had to be abandoned because of the failure of Congress to make the needed appropriations.

I venture these introductory remarks in part explanation of the record of the Department in apiculture, which it is my privilege to present to you.

The annual products of the apiahy have been variously estimated at from fifteen to twenty millions of dollars, while I need not insist to the members of this Society that the work of insects, and chiefly of our bees, in the fertilization of our seed and fruit-producing plants far exceeds in value all the honey and wax product, so that it is quite impossible to estimate the combined value of these direct and indirect benefits from the bees.

Fifteen years ago, when I first accepted a position in the Department, there was provision only for an entomologist without assistants or means for any experimental or field work. During the next four or five years I succeeded in impressing the Commissioner of Agriculture and Congress with a sense of the importance of the work to be done in efforts to counteract the ravages of injurious insects, and the appropriations for both office assistants and field work increased. But the self-evident advantage of endeavors to protect the farmer from some part of the immense losses occasioned by insects, had to fight its way into recognition. It was not until 1885 that the more important work done in counteracting the ravages of injurious species had sufficiently advanced to justify my giving some attention to apiculture, and the fact that nothing more resulted from the work then begun may, to some extent, be laid to the lack of effort on the part of the bee-keepers themselves, *i. e.*, to their failure to take united action, such as would bring home to the head of the Department, and to those in charge of the general appropriations, the needs and just demands of the industry.

However, that considerable has been done by the Department, and through its agency for bee-keepers—much more, probably, than most of you are aware of—the published reports of the Department show. These reports, hundreds of thousands of which have been distributed very generally over the land, have surely had their influence in the promulgation of intelligent and humane methods in the culture of bees. Beginning about the time of the first edition of Langstroth's celebrated work, or nearly a decade before any bee-periodical had been printed in the English language, the Department reports have from year to year given some notice of progress in bee-culture, statistics of honey and wax production, and on several occasions excellent little treatises on bees and bee-management. Notable among these is the article on the nature and habits of the honey-bee, in the report for 1857. I cannot give the name of the author, as the initials only of the Chief Clerk of the Patent Office are attached to it. In 1860 Mr. William Buckisch, of Texas, gave, in an extended article, a review of bee-culture as practiced by Dzierzon and his school. The essay by my old friend, Mrs. Ellen S. Tupper, of Iowa, published in the report for 1865, and covering her theory of bee-keeping, was widely read and frequently quoted, creating much interest in improved methods.

The introduction of Italian bees into this country is certainly one of the advances in American bee-culture which ranks second only to the invention of the frame hive, the honey extractor and the comb foundation machine. But how many even now know that the Department of Agriculture had anything to do with the matter? Leading text-books on apiculture are silent on this head. The fact is, however, that the first successful importation of Italian bees from their native land to America was made by the Department, and it was almost wholly from this importation that such skillful apiarists as Langstroth, Cary and Quinby bred and disseminated the race during the early '60's.

Individual effort had, for some years previous, been directed to securing this race of bees, and in the autumn of 1859 a few queens were landed here from Germany by Mr. P. J. Mahan, of Philadelphia, on his account, and by Samuel Wagner, of York, Pa., and Richard Colvin, of Baltimore, acting together. Those imported by Messrs. Wagner and Colvin were lost during the winter which succeeded, and those which Mr. Mahan

imported do not seem to have been multiplied as rapidly as the importation made through the Department of Agriculture the following spring.

Mr. S. B. Parsons, acting for the Department, was in Italy at this time, making purchases of cuttings and plants for testing in this country, and an order was transmitted to him by the Department to procure some hives of Italian bees. Ten were purchased by him in 1859, and forwarded to this country in May, 1860. These were distributed among several of the best bee-masters, and they at once set about the rearing and sale of the queens of the new race.

Thus it was that the Department succeeded where private enterprise had failed in this most important undertaking. Those who wish confirmation of this statement will find it in the Agricultural Report for 1859, page 543, and in that for 1863, page 530. The former is a letter written by Mr. Parsons while in Lausanne, Switzerland, and the latter is an extended article on the Italian honey-bee by Mr. Richard Colvin, a competent authority, and who had been one of the private parties who had tried during the years 1858-60 to import this particular strain from Europe.

It were beyond the scope of this communication to enlarge on the merits of the Italian race of bees, particularly as Mr. Benton has treated us to a communication on the varieties of bees; but I may be pardoned for calling attention to what I believe to be a truth which all will admit who are familiar with the progress of apiculture in the United States during the past thirty years or more, namely, that the benefits, direct and indirect, which have accrued to American aparian interests through the introduction of the bees of Italy, far exceed the few thousand dollars which, all told, the Department from the time of its organization to the present day has expended in the development of this industry as one of our national sources of wealth. As will appear from its report for 1877, the Department was earnestly solicited to appoint a Commission for the purpose of gathering statistical information as to the condition and growth of bee-keeping in the United States; to communicate with the largest and most successful bee-masters, and secure their methods of wintering, and otherwise managing bees; to test modern and improved aparian appliances, and recommend such as are worthy; to point out the most favorable bee-ranges in the country; to encourage the cultivation of honey-producing plants; and to ed-

ucate apiarists to use caps and crates of uniform size for commercial convenience. The Department had, however, neither the means nor the power to organize such a Commission as was urged.

In 1885 I was enabled to establish, in response to what I felt was an evident want, an apicultural station, having fortunately the full sympathy of Commissioner Colman in the work. The station was located at Aurora, Ills., and Mr. N. W. McLain, an enthusiastic and well-informed apiarist, was placed in charge. The reasons for establishing the station, and the objects in mind, I quote from the introduction to my report as Entomologist for that year:

"Among the subjects which I desire to have investigated in addition to some of more purely scientific interest, are the following:

"1. To secure the introduction and domestication of such races of bees as are reported to possess desirable traits and characteristics; to test the claims of such races of bees as to excellence, and to prove by experiments their value to the apiculturists of the United States, and their adaptation to our climate and honey-producing flora.

"2. To make experiments in the crossing and mingling of races already introduced, and such as may hereafter be imported, and by proper application of the laws of breeding endeavor to secure the type or types best adapted by habit and constitution to the uses of practical bee-keepers in the United States.

"3. To make experiments in the methods of artificial fertilization, and, if possible, demonstrate the best process by which the same may be accomplished.

"4. To study the true causes of diseases yet imperfectly understood, and the best methods of preventing or curing such diseases.

"5. To obtain incontestable results by intelligent experiments on scientific methods, as to the capacity of bees, under exceptional circumstances, to injure fruit; i. e., to set at rest the ever-discussed question of bees vs. fruit."

The experiments of the first year—the station having only been started in June—had reference to economy in the production of wax; feeding devices; the wintering of bees, and the question as to whether bees injure fruit; the artificial fertilization of queens, etc.

In 1886 the experiments as to whether bees can injure fruit or not, were continued, and Mr. McLain's report contains the results of experiments and ob-

servations as to wintering bees, the prevention of spring dwindling, bee forage, (especially in regard to plants, etc., that might be cultivated for honey); diseases (particularly foul brood), and the control of fertilization in confinement. These last two subjects received special attention again in 1887, and experiments in mating queens to selected drones were made.

In Commissioner Colman's report for 1888 occurs the following paragraph in explanation of the cessation of the apicultural experiments:

"Owing to the lack of specific appropriation, it has been necessary to discontinue the apicultural experiment station. This is to be regretted, as the station has done good work, and as it has accomplished results of considerable benefit to this extensive and growing industry. This Division stands ready to continue this work at any time when Congress shall make appropriation for it."

Personally, I was intensely interested in the results of this experimental work, and while unforeseen contingencies arose which materially interfered with my plans, yet I knew Mr. McLain to be a man full of energy and enthusiasm in the cause, and exceptionally well posted in all matters relating to bee-culture. Yet he never had the full sympathy or co-operation of some of the most voluminous writers on the subject, and who, from being looked up to as authorities, are not always most sympathetic with others. There is probably not one of Mr. McLain's critics who would have done more of real benefit to apiculture during the same time and under the same circumstances. The experiments to determine whether bees injure fruit or not, certainly put a quietus to the discussion in so far as grapes are concerned, and have done much to prevent misapprehension on the part of growers who are not bee-keepers, and to harmonize both classes.

Aside from the above, the observations and information contained in Mr. McLain's reports on foul brood, and in experiments looking to the control of fertilization of the queens, are many of them valuable, even though in the latter case he could not finally present any practical method of accomplishing this object.

The apicultural exhibit which I prepared for the Department for the Paris Exposition of 1889, was largely made up of material contributed by individual bee-keepers, and received very favorable notice from foreign bee-experts. In fact, it was rated the best of all the exhibits

in this line. It certainly had much to do with educating foreigners as to the forward part taken by Americans in this industry, notwithstanding the display was hampered by restricted space. The success of the exhibit was largely due to the efforts of Mr. McLain.

In 1890 I felt that the appropriations to the Division of Entomology justified further effort to do something for bee-culture. It was my purpose to continue experimentation more especially in lines which individual efforts could not so well reach, as indicated in the previous work. The conditions around Washington are very unfavorable for this kind of experimentation, and three methods of carrying it on remained. One was, to establish a station controlled and worked entirely by the Department, as had been done under Mr. McLain, previously. Another was to establish a number of sub-stations in different parts of the country, representing different climates, but all under the general management of some one especially in charge here at Washington. The third was to establish one or more stations in connection with some of the State experiment stations created by the Hatch Bill.

After visiting a number of prominent bee-keepers in the South, and considering the matter fully in connection with the limited means to be devoted to the subject, the last of these methods was chosen. Prof. A. J. Cook and Mr. J. H. Larrabee were commissioned early in 1891 to conduct the experiments at the apiary of the Michigan Agricultural College. The results of the work of that year are reported in Bulletin No. 26 of the Division of Entomology. They included a continuation of the earlier experiments, especially planting for honey; observations and experiments in regard to the fertilization of plants by bees; selection in breeding; the amount of honey consumed in the secretion of a pound of wax; the effects on bees of spraying fruit-trees while in blossom; and other minor experiments and observations, some of them a repetition of the work that had previously been performed by others.

There was not much that was original in the apiarian work of the year, and perhaps the most important were the results in reference to the poisoning of bees by arsenical sprays. Moreover, the policy of dual interest in and control of the work at the station was not the most satisfactory as a working policy, because of the difficulty of separating the Department's interests from those of the station, and the feeling which developed

on the part of others, and which I could not very well overcome myself, that the funds furnished by the Department were utilized primarily to improve a somewhat neglected apiary, and to add to the income of the station.

Prof. Cook's commission expired June 30, 1891, and Mr. J. H. Larrabee was appointed to continue the work, which he did up to June 30, 1892, when, by virtue of the great reduction in the appropriation for the Division of Entomology for the ensuing fiscal year, all the bee-work had to be abandoned there. Mr. Larrabee's report will soon appear, and will, I think, make a creditable showing for the season, considering the means which he had at command.

Early in 1891 I had considerable correspondence with Mr. Frank Benton, whose interest and work in apiculture you all know, and who had made a personal effort to introduce *Apis dorsata*. The failure of his effort was due to over-exertion and undue exposure, and I have little doubt that, under more favorable circumstances, and with the aid of the Department, the effort would prove successful. I felt that of all men he would be the most desirable agent to employ in the effort to introduce *Apis dorsata*, because of his familiarity with the subject, and his acquaintance with the countries to be visited; but in addition I had some important incidental work that I wished him to do in that connection, namely, the introduction also of certain parasitic forms of injurious insects, and particularly the introduction of the caprifig insect, *Blasotophaga psenes*, to colonize in those parts of California where the Smyrna fig is cultivated.

I had made all due arrangements, in consultation with Assistant Secretary Willits, fully expecting to be able to send Mr. Frank Benton on this proposed trip, and had so economized the appropriation that there was means to do it. Mr. Benton, also, had been led to give up other plans in anticipation of this mission. The project was never carried out, however, for the simple reason that the Secretary finally refused to endorse it. There seems to have been some promise made to the Senator who had charge of the appropriation Bill that no one should be sent abroad, or at least this was the chief reason given for the refusal to carry out my recommendations and wishes. Professor Cook was made aware of these circumstances, and it is consequently somewhat surprising that, in a recent communication to the AMERICAN BEE JOURNAL (Oct. 13,

1892), he should insinuate that the Entomologist felt no hearty concern for the bee-keepers' interests, and should urge that "all move in solid phalanx upon the head of the Department" in order to "gain our desires and rights."

What may be hoped from the introduction of *Apis dorsata* most of you are probably aware of, but I may say that there was some hope that it might be domesticated in our hives like the common *mellifica*, while Mr. Benton thinks that possibly some advantage might be gained by crossing it with that species. On physiological and zoological grounds I have doubts whether this can be done to any advantage, for, while hybridism is feasible with the races of *mellifica* (which, however much they may differ in popular names, are zoologically mere varieties of one and the same species), yet *Apis dorsata* is a sufficiently distinct species, and even if crosses could be obtained between it and *mellifica*, it is questionable whether such crosses would be fertile. Mr. Benton, however, has fully set forth the possibilities in *Gleanings in Bee-Culture* for June 15, 1892, and also in his remarks before this Association, and while the introduction of this species would not be the sole object in sending him abroad, the question of the possible value of this large bee of India is of sufficient importance to justify thorough experimentation and effort.

WHAT THE NATIONAL DEPARTMENT OF AGRICULTURE CAN DO FOR APICULTURE.

So far I have indulged in retrospect, and indicated what the Department has done, or attempted to do. Let me now come to the second part of the subject, viz.: what the National Department of Agriculture can do for apiculture.

What it may accomplish—I sincerely hope this may be much—will depend greatly upon what sums Congress may see fit to appropriate for such investigations, and this will depend in turn, to some degree, upon what representations as to the needs of the industry, and the possible benefits to the material interests of the country, are made to the head of the Department, to the Committees on Agriculture, and to other members of Congress by their constituents. Certain kinds of experimental work can be undertaken by individuals without serious interference with the main work of their apiaries. Indeed, it is desirable that each should experiment in a limited way, for localities differ in respect of climate, flora, etc.; in short, the conditions upon which methods of manage-

ment depend are so variable that each progressive bee-keeper must study to ascertain by experimentation what methods are best adapted to his own individual surroundings.

But there are certain larger fields of investigation, requiring more time and expenditure than individuals usually have at their command, and the results of which are pretty sure to benefit apiculture, if not directly at least indirectly. For instance, if a species or race of bees could be bred or introduced which, in the early part of the season, when bumble-bees are few in number, would fertilize the red clover, and later in the season do the same work more thoroughly than it is now done, there is no question that we should reap a reward in the larger yield of clover seed, and in this way our pasturage would be very generally improved. So that this would indirectly affect beneficially our stock and dairy interests, to say nothing of a more general employment of red clover as a green manure in the increase of most of our crops. In cases like this the benefit would be general, and so great that the expense of accomplishing it would be insignificant in comparison. Even an experiment which fails, and which would be disastrous to individual participants in it, would not be felt by the general Government, and might serve to point out the way to success in subsequent attempts, for failure often proves very useful in pointing out the directions in which we should not look for anything valuable. Thus, if the Department by ample effort should prove that nothing can be gained in any given direction, it would save further disappointment to individual experimenters, and prevent a repetition of useless effort.

To my mind the character of the work to be undertaken by the Department should be of such a nature as to benefit the industry in all parts of the country alike, and prominent among the subjects which it should undertake is this introduction and testing of foreign races of bees, of which there is much yet to discover, and about which our actual experimental knowledge is limited. The distribution of queen-bees of improved varieties where they would most aid in building up the industry, might be undertaken by the Department wherever it would not interfere with individual effort in this direction. But while the lines for Government action so far as the economic side is concerned, are limited, there is a large and most interesting field for further scientific investigation of the actual life-history of the bee,

of its diseases, and of its relations to plant-lice.

Few of you who do not view the economy of the bee from the purely entomological or scientific stand-point, are aware of the errors that are yet extant in connection with the subject, and are still perpetuated in many of the popular treatises on the bee, and there is no better evidence of the biological questions yet to be decided than the discussions at such gatherings as these, which, as evidenced this afternoon, involve the influence of the bee on the sweets which it gathers. I am satisfied that no thorough investigation under competent direction would fail to elicit most interesting facts, and to settle many disputed points.

In connection with the wintering of bees in the cooler portions of our country, there is much that remains to be investigated. The statistics of the industry have never been properly collected, and could not be, except by some national organization.

These are a few of the directions, gentlemen, in which I feel that the National Department may work advantageously, and if, in dealing with the subject, I have endeavored to indicate in plain words some things which the Department has and has not done, it is in the hope of calling attention publicly to the matter, and of bringing about in the future the action which I feel all beekeepers desire.

C. V. RILEY.

In reply to a question, Dr. Riley said that in the Secretary of Agriculture's report, there was a recommendation to re-organize the Department, and to lessen the number of the Divisions. For this reason he doubted if the plan of asking for the addition of another Division would be looked upon with favor. He also doubted if an experimental apiary could be, or rather *would* be, established at Washington. If we knew how difficult it had been for him to secure what was necessary for him in carrying on the legitimate work of his own special department, he doubted if we would ask for what had been suggested that we ask for. He said that the best thing that beekeepers could do would be to make friends with the incoming Secretary of Agriculture, and get him interested in bee-culture.

It was decided to retain the committee another year.

Relinquishing Incorporation.

The Secretary read the following communication from Wm. F. Clarke, of

Guelph, Ont., Canada:

Fellow Bee-Keepers:

Being unable to attend your annual convention, by reason of distance and cost of the journey, I beg to submit for your consideration, a respectful remonstrance and protest against the action taken by the Association in regard to incorporation.

1. Because the said action was unconstitutional. By virtue of its original Constitution repeatedly re-affirmed, the Association was international. At the outset, both the United States and Canada were contracting parties. By virtue of the incorporation, the international feature of the Association has been destroyed, and the body has been converted into a local and State organization.

2. Because the action was taken with undue haste, and without full discussion. At the Keokuk meeting, where the matter was literally rushed through, the attendance was small, comprising but few of the older members, and none at all from the far East. Such an important step might at least have had a year's notice of motion, and full discussion in the bee-periodicals.

3. Because the action was precipitated in the face and teeth of strong objection on the part of the two Canadian delegates, who forwarned the prime movers in the scheme, that those whom they represented would consider the proposed incorporation equivalent to an act of expulsion. The chief promoters of the scheme have since declared that they did not understand that Canadian beekeepers would regard it as an act of excommunication. It has been demonstrated that the Canadian delegates present at Keokuk were right in their judgment. Their clients assembled at the annual meeting of the Ontario Bee-Keepers' Association in January last, unanimously took this view of the matter.

4. Because the act of incorporation is of no earthly use. It is like the fifth wheel to a carriage, or a second tail to a dog. The only argument in its favor urged by its advocates, has been that it would enable the Association to hold property, sue, and be sued; neither of which it needs or wants to do. It is therefore, literally, a work of supererogation.

5. Because it has caused friction and unpleasant feelings among those who, for a score of years, had worked in harmony. Coming at a time when tariff

and other political irritations were unusually rife between the two countries, it was most unfortunate. Little people are perhaps more sensitive than they need be, but there is a certain degree of self-respect which no Nation can afford to surrender. Even a minority has its rights. It may be that we have "kicked" too vigorously in regard to this matter, and that we have not shown sufficient courtesy to our big brother Jonathan, but it is not easy to be polite when you are put out-of-doors. I have, perhaps, been the chief offender in this respect, and I most humbly withdraw and make apology for any improper utterances and uncharitable imputation of motives with which I may be chargeable. We probably indulge in greater freedom of speech than is common or deemed proper on your side of the lines, but we cherish at heart a kind and cordial feeling toward our fellow bee-keepers in the United States, and sincerely desire to live on terms of peace, good fellowship, and co-operation with them.

For the reasons above given, I would respectfully overture the Association, and earnestly beg of it to re-consider and revoke the act of incorporation, so as to restore the intimate and harmonious relations of past years. As one of the founders of the Association, and one of its oldest members, I think I may fairly claim a kind and indulgent consideration of this appeal.

All of which is respectfully submitted.
WM. F. CLARKE.

E. R. Root—Inasmuch as the proposed change in the National Bee-Keepers' Union, if it goes into effect, will enable the Union to perform the work that was in view for the North American when it was incorporated, and incorporation has caused a little unpleasantness between us and our Canadian brethren, it might be well to give up incorporation; but I would not counsel hasty action. There are not many here. I am the only member present of the original committee who proposed the feature of incorporation. It would only be fair to allow the others to be heard; hence I move that the matter be laid on the table one year, with a recommendation that it be favorably considered at the next meeting. Carried.

Shall the Scope of the Bee-Keepers' Union be Broadened?

An essay had been expected from the General Manager, Thomas G. Newman, on this subject. The Secretary read a

letter from Mr. Newman, in which he explained that the press of business had prevented him from preparing an essay. The Secretary also read a "proof" showing the proposed changes in the Constitution of the Union. They would allow the money and influence of the Union to be used for any purpose for which the Advisory Board thought it desirable.

E. R. Root—It has been many times shown that an organization of some kind is needed to fight adulteration. To have a separate Union for each kind of work is too expensive. Better have one Union, and a good one.

Upon motion, the proposed change was recommended.

Upon motion, it was decided to pay George W. York & Co., of Chicago, Ills., \$20 toward the cost of publishing a report of the proceedings in pamphlet form, as usual. It was also voted to pay the Secretary \$50 for his services.

The following officers were elected for the ensuing year:

President—Dr. C. C. Miller, Marengo, Ills.

Vice-President—J. E. Crane, Middlebury, Vt.

Secretary—Frank Benton, Washington, D. C.

Treasurer—George W. York, Chicago, Ills.

Treasurer's Report.

The Treasurer, Mr. Ernest R. Root, then presented the following report:

RECEIPTS.

Cash from former Treasurer.....	\$81.38
Interest on average monthly balance..	3.85
Membership fees.....	25.00
Affiliation fees.....	30.00
Total.....	\$140.23

DISBURSEMENTS.

To T. G. Newman & Son, amount toward printing proceedings of Albany convention.....	\$20.00
To postage on programmes, as per bill of H. M. Seeley.....	.50
To W. Z. Hutchinson, for reporting proceedings of Washington convention..	50.00
Total.....	\$70.50

RECAPITULATION.

Total receipts.....	\$140.23
Total disbursements.....	70.50
Cash on hand.....	\$69.73

The report was accepted and approved.

Honorary Members.

Upon motion of Frank Benton, the following were made honorary members:

C. J. H. Gravenhorst, Wilsnack, Prussia.
 Samuel Simmins, Newhaven, England.
 Cav. Andrea de Rauschenfels, Collecchio (near Parma), Italy.

Harald Hovind, Tredestrand, Norway.
 George de Layens, Louve (Eure), France.

Hjalmar Stalhammar, Gothenburg, Sweden.

Karl Gatter, Vienna, Austria.

A. de Zoubareff, St. Petersburg, Russia.

G. P. Kandratieff, Russia.

Charles Dadant, Hamilton, Ills.

*Alfred Neighbour, London, England.

*Edward Cori, Bruex, Bohemia.

Prof. H. W. Wiley, Washington, D. C.

Chicago, Ills., was selected as the place for holding the next meeting; the time of meeting to be left to the Executive Board, but the society recommended the forepart of October as a desirable time to meet.

The convention then adjourned.

W. Z. HUTCHINSON, S



Review of a Report of Foul Brood Experiments.

Written for the American Bee Journal

BY J. H. LARRABEE.

The *Canadian Bee Journal* of Jan. 1st contains a report by J. J. Mackenzie, the bacteriologist of the Provincial Board of Health, upon the subject of Foul Brood. The experiments were instituted at the suggestion of an Experimental Union, organized in Ontario, Canada, for advancing such work. This report contains some new ideas, and new light is added to many old ones. This is one of the many lines of work where a trained scientist is of more value as an investigator than any bee-keeper could be.

The scientist first isolated and examined microscopically the bacillus of foul brood, and then having determined

its character, he reviewed the methods of cure, and tested the values of antiseptics and heat as destroying agents.

He says: "I certainly would not be prepared to spot foul brood in an apiary, though I certainly think I can under the microscope;" thus directly contradicting Mr. C. J. Robinson, who, on page 56 of the *AMERICAN BEE JOURNAL* for Jan. 12th, states that "a glass cannot aid the eye to distinguish foul brood virus from other germs." Such statements as the latter cannot be weighed against the former, when we consider the sources from which they come.

Mr. Robinson has also promulgated the old theory that foul brood generates spontaneously under certain peculiar (?) conditions. Mr. Mackenzie says, referring to the above theory, "Unfortunately it is a theory which is not supported by the results of investigation." Of course, Mr. Robinson, Mr. McEvoy, Mr. Jno. F. Gates, and our honey-weather prophet—Mr. Sam'l Wilson—and others will not accept such evidence, but I prefer to accept the statements of those who have investigated the subject rather than the *dictum* of those who state it can be done, but who have never, and never will originate foul brood without infection from the disease itself.

There are two common methods by which foul brood is cured or eradicated from an apiary, viz.: 1st, by starvation; 2nd, by the use of disinfectants. The effect of antiseptics, and of hot water upon foul brood germs was quite fully investigated. Prof. Mackenzie succeeded in rearing the foul brood bacillus from a cake of wax into which when melted he had introduced the germ, thus proving that simply melting wax will not destroy the germs in it.

By the use of silk threads saturated with jelly filled with growth of the bacillus (which threads were then suspended in wax at the boiling temperature of water), he concluded that "to destroy the foul brood in wax it is necessary to heat to a temperature of at least 194° F., for at least three hours." If these preliminary conclusions are correct, why is it that the disease is seldom if ever spread by the use of comb foundation? Even Mr. Mackenzie states that he has yet to discover a well-authenticated case where this has occurred.

The methods of scores of lesser foundation-makers are not as thorough as those of Messrs. Dadant, Hunt and Root, and all sorts of wax from unknown localities is made into foundation with-

out ever having been heated to the boiling point, or having remained at that temperature for two or three hours. May it not be that the heating of the wax at two distinct times renders the spores harmless? The wax is melted and "rendered" from the combs and caked, then shipped to the foundation maker who melts it at least once, often more, when dipping into sheets for foundation. Possibly the greater specific gravity of the germs, as suggested, may cause them to settle to the bottom of the wax, where, coming in contact with the water always used in melting, the germ would be very soon destroyed, if Mr. Cornell's theory of dry *vs.* moist heat be true.

I should like the length of vitality of the spores when immersed in boiling water, tested to determine the truth of this theory. Mr. Mackenzie has promised us more light upon several points in consideration of this subject, after another season's work, when doubtless many of these doubtful points will be cleared up.

Referring to the starvation method of cure, as used by Mr. McEvoy and others, Mr. Mackenzie says: "If this is combined with a removal to absolutely clean hives with new foundation, it may succeed; but I must say that absolute cleanliness in this respect must be insisted upon."

That the extreme virulence of the disease is recognized, is apparent from the above statement, which is again repeated in another form in another passage. Without doubt many cases of so-called spontaneous generation could be traced to uncleanness or carelessness in treating the disease.

It was found that the spores of foul brood could not be destroyed by the use of antiseptics of the strength advised by Cheshire and others, but the chemicals prevented the further growth or spread of the disease. May this not be valuable, as teaching us to combine with the starvation method of cure the feeding of medicated syrup to prevent the germination and growth of the spores until the bees can cleanse themselves from all traces of the disease? This was, I think, the method used by Mr. A. I. Root in curing the disease in his apiary.

Prof. Mackenzie considers the possibility that there may be a difference in the power of individual bees to resist the disease. Now it seems to me he is mistaken in thinking that the presence of the germs of the disease in the intestinal canal of mature bees is evidence that the bees themselves are diseased.

As I understand it, the disease is of the brood, and the germs are found in mature bees only when carried there in their food, or in the attempt to clean out the filth from the cells, and never affects the blood or organs of the mature bee; hence, these mature bees do not resist the disease.

New, and I doubt not effectual, agents for cleansing hives, etc., in connection with hot water, are suggested. They are soft soap and washing soda, in a very strong solution.

While I express the hope that these experiments may be continued under the same competent worker, I cannot but regret that these United States of America cannot do as much as is Canada, for her bee-keeping interests; and that we cannot send a bacteriologist, chemist, botanist, and other scientists to the apiary, hand in hand with the practical bee-keeper, there to work out together these many problems waiting to be solved.

Larrabee's Point, Vt.



Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Bees All Right in the Cellar.

My bees are all right in the cellar. I am 73 years old, and like bee-keeping as well as ever. My bees did very well last summer. D. P. SHIGLEY.

Mankato, Minn., Jan. 31, 1893.

Seem to be Wintering Well.

We have had a cold winter here up to this time. My bees are wintering on the summer stands, and seem to be doing very well. There was very little swarming the past season, but the hives were full of bees in the fall, and they looked large, plump, and healthy. I like to read the reports from the brethren in the BEE JOURNAL. J. T. HIGGINS.

Bethany, Mo., Feb. 4, 1893.

Can Always Tell their Experience.

I imagine a number of the correspondents of the BEE JOURNAL belong to a certain church of whom it is said, "You can never stick them; for when they have nothing else to say, they can always fall back on their experience." Lighthouses and buoys are to keep mariners from stranding, so the experience of veterans in bee-culture are as beacon lights to the amateurs.

I was pleased to read in the BEE JOURNAL that Mrs. Jennie Atchley was going to give advice to beginners. We are watching and waiting, and possibly the beginners of to-day may be the veterans of the future.

My average, during the past season, was 50 pounds per colony, with ample stores left to winter on. So much for a poor season, without any white clover.

HORATIO N. SCRATCH.

Kingsville, Ont., Jan. 24, 1893.

[You will notice that Mrs. Atchley commences her advice to beginners in this issue of the BEE JOURNAL.—ED.]

Bees Wintering Well—Cold Weather.

It is 35° below zero this a.m., with about 18 inches of snow. * It is 40° above zero in my bee-cellar. Bees seem to be wintering well so far.

C. THEILMANN.

Theilmanton, Minn., Feb. 4, 1893.

Prospects Were Never Better.

Prospects for a good season were never better in this part of the State. Almond and peach trees are just commencing to bloom.

L. L. JACKSON.

Soledad, Calif., Jan. 29, 1893.

Nova Scotia Bee-Keepers' Convention.

Of late considerable interest has been shown in the advancement of bee-culture in Nova Scotia, and as this industry is of quite a strong growth in Kings county, it was thought advisable to call those interested together to see what could be done to forward the advancement of the industry. A number of those interested met at the American House, in Wolfville, on Jan. 5th, and from the strong interest shown, a bee-convention was formed, being the only one at present in Nova Scotia. The convention was not confined to Kings

county alone, but thrown open to Nova Scotia.

J. B. Davison, of Wolfville, was chosen President; Chas. R. Pineo, of Chipman Corner, Vice-President; E. C. Johnson, of Wolfville, 2nd Vice-President; E. F. Beeler, of Berwick, Secretary and Treasurer.

The association starts with a good, strong membership. The time was well taken up by several of the members in showing the advantages and benefits to be derived from the culture of bees, and it is expected that when the convention meets again in March, that the session will be of much interest to bee-keepers.

Berwick, N. S. E. F. BEELER, Sec.

Reports from Minnesota.

Bees are wintering finely so far. They have good white honey to "go it" on, and if they do not make a "go" of it, it will be for some other cause besides the honey. I saw a statement last spring from Wisconsin, saying it was a wonderment to him how the bees in Minnesota could get enough to live on. Mr. "Wis.," we are near neighbors, and as I have lived in Wisconsin, I would say that Minnesota compares well to her neighbors in the production of honey, as well as everything else for this latitude.

I have 43 colonies wintering, but got no honey to speak of in 1892. The cold, wet weather in early spring was the cause of it.

I will give the statement of my bee-friend, Mr. O. H. Curtis, to show that Minnesota gets a "lick" once in a while. Mr. C. had 4 colonies of the 5-banded bees, and one colony of the 3-banded variety. From the 5, spring count, he increased to 13, and obtained 800 pounds of honey in one-pound sections, all white as could be. The hives were well supplied with honey for winter. He thought the 3-banded colony "got there" in a little the best shape.

M. S. SNOW.

Osakis, Minn., Jan. 28, 1893.

Doolittle's Queen-Rearing

book should be in the library of every bee-keeper; and in the way we offer to give it, there is no reason now why every one may not possess a copy of it. Send us one new subscriber for a year, and we will mail the book to you bound in paper, as a present.



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Special Notices.

The Date on the wrapper-label of this paper indicates the end of the month to which you have paid for the JOURNAL. If that is past, please send us one dollar to pay for another year. This shows that Mr. Porter has paid his subscription up to the end of December, 1893:

Wallace Porter Dec 93
Suffield, Portage co, Ohio

"Bees and Honey"—see page 197.

List of Honey and Beeswax Dealers,

Most of whom Quote in this Journal.

Chicago, Ills.

R. A. BURNETT & Co., 161 South Water Street.
J. A. LAMON. 44 & 46 South Water Street

New York, N. Y.

F. I. SAGE & SON, 183 Reade Street.
HILDRETH BROS. & SEGELKEN.
28 & 30 West Broadway.

San Francisco, Calif.

SCHACHT, LEMCKE & STEINER, 10 Drumm St.

Minneapolis, Minn.

J. A. SHEA & Co., 14 & 16 Hennepin Avenue

Kansas City, Mo.

HAMBLIN & BEARSS, 514 Walnut Street.
CLEMOMS-MASON COM. CO., 521 Walnut St.

Albany, N. Y.

H. R. WRIGHT, 326 & 328 Broadway

Hamilton, Ills.

CHAS. DADANT & SON.

Cincinnati, Ohio.

C. F. MUTH & SON, cor. Freeman & Central avs.

Read our great offer on page 197.

Honey & Beeswax Market Quotations.

The following Quotations are for Saturday, February 11th. 1893:

CHICAGO, ILL.—There are occasional sales of best grades of comb honey, but the retailers are not yet sold out on supply laid in before the holidays. Prices are a little easier, especially on that which will not grade "fancy"—such brings 17@18c., and other grades 12@16c. Extracted, 6@9c., as to quality.
Beeswax—22@25c. R. A. B. & Co.

CHICAGO, ILL.—Fancy stock is very scarce, with plenty of inquiry, with good prices offered for same. It sells readily at 18c.; No. 1 comb, 16@17c. Dark sells slow. White extracted, fair supply, with good demand at 8½; dark, 6@7c. Beeswax—23@25c. J. A. L.

CINCINNATI, OHIO.—Demand from manufacturers is slow, but the demand is good for extracted for family use. It brings 6@8c.—No good comb is on our market. It would bring 14@16c.

Beeswax—Demand good, at 23@25c for good to choice yellow. Supply good. C. F. M. & S.

NEW YORK, N. Y.—Demand for comb honey is very light. White fancy stock is well cleaned up. The market is well stocked with off grades and buckwheat, and prices are irregular. Extracted is in good demand and stocks are light. We quote: Basswood and white clover, 8@8½c.; buckwheat, 6@6½c.; Southern, 70@75c. per gallon.
Beeswax—25@27c. H. B. & S.

SAN FRANCISCO, CALIF.—Choice extracted is scarce at 7@7½c., and demand heavier than supply. Choice comb is not scarce at 10@12c., according to quality, 1-lbs. Beeswax is neglected at 22@23c. S., L. & S.

BOSTON, MASS.—Honey is selling slow and prices are lower. Best 1-lb. comb, 16@17c.—Extracted, 8@10c.
Beeswax—None on hand. B. & R.

KANSAS CITY, MO.—Demand good, supply very light. White 1-lbs., 16c. Extracted, 6@7c. No beeswax on the market. H. & B.

MINNEAPOLIS, MINN.—The market is good. We quote: Fancy white clover 1-lbs. sell fast at 18c.; 2-lbs. 16@17c. Buckwheat, comb, 13@14c. Extracted, in barrels, 7@8c.; in 5 or 10 lb. kegs., 9@10c. J. A. S. & C.

KANSAS CITY, MO.—Receipts and stocks very light, demand good. We quote: No. 1 white 1-lbs. 16@17c.; No. 2, 14@15c.; No. 1 amber 1-lbs. 15c.; No. 2 amber, 10@12c. Extracted, white, 7@7½c.; amber, 5@6.
Beeswax—20@23c. C-M. C. C.

ALBANY, N. Y.—Our honey market is slow on account of cold weather, but our stock was never so light as now. We have less than 50 cases of honey on hand, and only one barrel of extracted; when usually we have 1,000 cases in stock. For honey not granulated in comb, we quote: White (small), 15@18c.; mixed 13@14c.; dark, 10@11c. Large comb and double glass sell for 1 to 2c. less per lb. Extracted, white, 8½@9c.; amber, 7½@8c.; buckwheat, 7@7½c. H. R. W.

Great Premium on page 197!